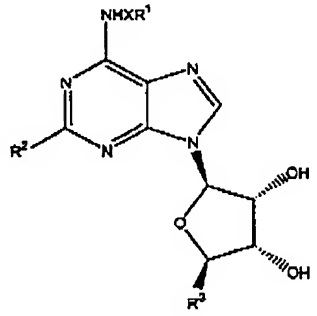
AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listing of claims in the application. For the Examiner's convenience, a complete listing of all pending claims is attached as Appendix A.

LISTING OF CLAIMS:

1. (original) A compound of the formula:



Formula I

wherein:

R^1 is optionally substituted lower alkyl, optionally substituted cycloalkyl, optionally substituted aryl, or optionally substituted heteroaryl;

X is a covalent bond or optionally substituted alkylene;

R^2 is R^4-Z-Y-C≡C- or optionally substituted pyrazolyl:

in which Y is optionally substituted alkylene, Z is oxygen, sulfur or -NH-, and R^4 is optionally substituted aryl or optionally substituted heteroaryl; and

R^3 is hydroxymethyl or -C(O)-NR^5R^6;

in which R^5 and R^6 are independently hydrogen or lower alkyl.

2. (original) The compound of claim 1, wherein R^2 is optionally substituted pyrazol-1-yl.

3. (original) The compound of claim 2, wherein R^1 is optionally substituted alkyl or optionally substituted aryl and R^3 is hydroxymethyl.

4. (original) The compound of claim 3, wherein R^2 is pyrazo-1-yl substituted by optionally substituted lower alkyl, ester, aminocarbonyl, optionally substituted aryl, or optionally substituted heteroaryl.

5. (original) The compound of claim 4, wherein pyrazol-1-yl is substituted by optionally substituted phenyl or optionally substituted benzyl.

6. (original) The compound of claim 5, wherein R^1 is optionally substituted lower alkyl and X is a covalent bond.

7. (original) The compound of claim 6, wherein R^1 is methyl and R^2 is 4-(4-methoxyphenyl)pyrazol-1-yl, namely (4S,2R,3R,5R)-5-(hydroxymethyl)-2-{2-[4-(4-methoxyphenyl)pyrazolyl]-6-(methylamino)purin-9-yl}oxolane-3,4-diol.

8. (original) The compound of claim 6, wherein R^1 is n-propyl and R^2 is 4-(4-methoxyphenyl)pyrazol-1-yl, namely (4S,2R,3R,5R)-5-(hydroxymethyl)-2-{2-[4-(4-methoxyphenyl)pyrazolyl]-6-(n-propylamino)purin-9-yl}oxolane-3,4-diol.

9. (original) The compound of claim 6, wherein R^1 is methyl and R^2 is 4-(4-chlorobenzylaminocarbonyl)pyrazol-1-yl, namely (1-{9-[(4S,2R,3R,5R)-3,4-dihydroxy-5-(hydroxymethyl)oxolan-2-yl]-6-(methylamino)purin-2-yl}pyrazol-4-yl)-N-(4-chlorophenyl)carboxamide.

10. (original) The compound of claim 6, wherein R^1 is methyl and R^2 is 4-(4-chlorobenzylaminocarbonyl)pyrazol-1-yl, namely (1-{9-[(4S,2R,3R,5R)-3,4-dihydroxy-5-(hydroxymethyl)oxolan-2-yl]-6-(methylamino)purin-2-yl}pyrazol-4-yl)-N-(4-chlorophenyl)carboxamide.

11. (original) The compound of claim 4, wherein R^2 is pyrazo-1-yl substituted by optionally substituted heteroaryl.

12. (original) The compound of claim 11, wherein R^1 is n-propyl and R^2 is 4-(pyrid-2-yl)pyrazol-1-yl, namely (4S,2R,3R,5R)-5-(hydroxymethyl)-2-[4-(pyridin-2-yl)pyrazolyl]-6-(n-propylamino)purin-9-yl}oxolane-3,4-diol.

13. (original) The compound of claim 5, wherein R^1 is optionally substituted aryl and X is alkylene.

14. (original) The compound of claim 13, wherein R^1 is 3-iodobenzyl and R^2 is 4-(4-methoxyphenyl)pyrazol-1-yl, namely (4S,2R,3R,5R)-5-(hydroxymethyl)-2-{2-[4-(4-methoxyphenyl)pyrazolyl]-6-(3-iodobenzylamino)purin-9-yl}oxolane-3,4-diol.

15. (original) The compound of claim 1, wherein R^2 is optionally substituted pyrazol-4-yl.

16. (original) The compound of claim 15, wherein R^1 is optionally substituted alkyl or optionally substituted aryl, R^3 is hydroxymethyl, and X is a covalent bond.

17. (original) The compound of claim 16, wherein R^1 is methyl, R^2 is 1-benzylpyrazol-4-yl, R^3 is hydroxymethyl, and X is a covalent bond, namely (4S,2R,3R,5R)-5-(hydroxymethyl)-2-{2-[1-benzylpyrazolyl]-6-(methylamino)purin-9-yl}oxolane-3,4-diol.

18. (original) The compound of claim 16, wherein R^1 is n-propyll, R^2 is 1-benzylpyrazol-4-yl, R^3 is hydroxymethyl, and X is a covalent bond, namely (4S,2R,3R,5R)-5-(hydroxymethyl)-2-{2-[1-benzylpyrazolyl]-6-(n-propylamino)purin-9-yl}oxolane-3,4-diol.

19. (original) The compound of claim 1, wherein R^2 is R^4-Z-Y-C≡C-.

20. (original) The compound of claim 19, wherein R^4 is optionally substituted phenyl and Y is alkylene of 1-3 carbon atoms.

21. (original) The compound of claim 20, wherein R^4 is phenyl optionally substituted by methoxy or chloro, and Y is methylene.

22. (original) The compound of claim 21, wherein R^1 is optionally substituted alkyl, X is a covalent bond, and R^3 is hydroxymethyl.

23. (original) The compound of claim 22, wherein R^1 is methyl, R^4 is phenyl and Z is oxygen, namely 2-hydroxymethyl-5-[6-methylamino-2-(3-phenoxypropyn-1-yl)purin-9-yl]-tetrahydrofuran-3,4-diol.

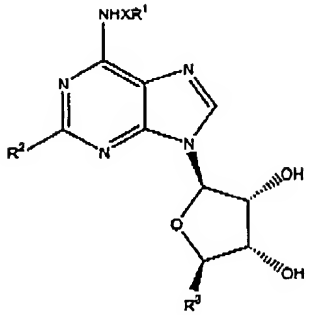
24. (canceled) A method of treating a disease state in a mammal that is alleviable by treatment with a A_3 adenosine receptor agonist, comprising administering to a mammal in need thereof a therapeutically effective dose of a compound of claim 1.

25. canceled) The method of claim 24, wherein the disease state is cancer.

26. (canceled) The method of claim 24, wherein the disease state is neutropenia.

27. (original) A pharmaceutical composition comprising at least one pharmaceutically acceptable excipient and a therapeutically effective amount of a compound of claim 1.

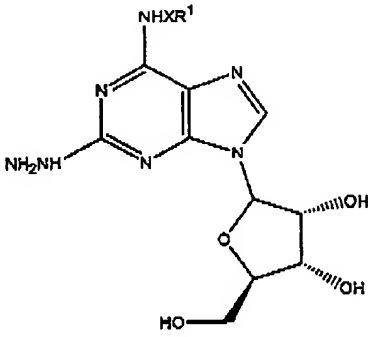
28. (canceled) A process for the preparation of a compound of Formula I:



in which R^2 is optionally substituted pyrazol-1-yl;

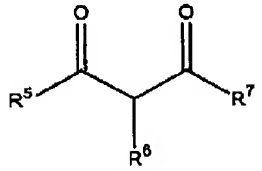
comprising:

contacting a compound of the formula:



(3)

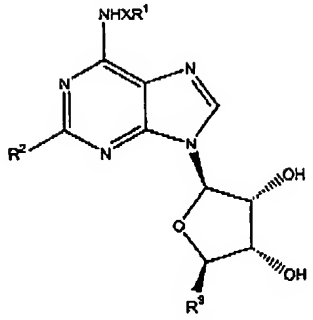
with a compound of formula:



(4)

29. (canceled) The process of claim 28, wherein the reaction is conducted in an inert solvent chosen from methanol, ethanol, n-propanol, isopropanol, and t-butanol.

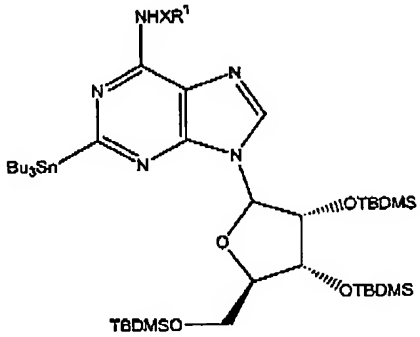
30. (canceled) A process for the preparation of a compound of Formula I:



in which R^2 is optionally substituted pyrazol-4-yl;

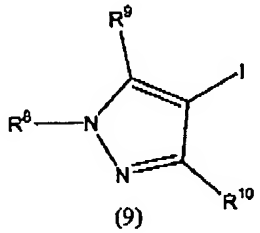
comprising

contacting a compound of the formula:



(8)

with a compound of the formula:



(9)

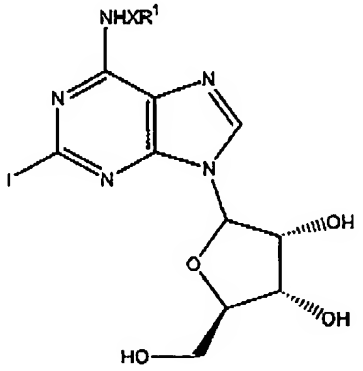
in the presence of a palladium complex and a copper salt in an inert solvent, and contacting the product with a mild acid.

31. (canceled) The process of claim 30, wherein the palladium complex is $Pd(PPh_3)_4$, the copper salt is CuI, the inert solvent is N,N-dimethylformamide, and the mild acid is ammonium fluoride.

32. (canceled) A process for the preparation of a compound of claim 1, in which R^2 is R^4-Z-Y-C≡C-;

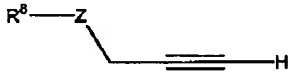
comprising:

contacting in an inert solvent a compound of the formula:



(12)

with a compound of the formula:



(13)

in the presence of a mild base, a copper salt and a palladium catalyst.

33. (canceled) The process of claim 32, wherein the inert solvent is N, N-dimethylformamide, the base is triethylamine, the copper salt is copper iodide, and the palladium catalyst is dichlorobis-(triphenylphosphine)palladium(II).